

Wednesday, 9/26/2007 7:56:03 AM

Kim Johnston

# Process Sheet

SPLIT

Customer : DU-DAR001 Dart Helicopters Services  
 Job Number : 34673-2  
 Estimate Number : 10033  
 Job Number :  
 Job Issue : 9/26/2007 S.O. No. :  
 Job Rev : 00  
 Job Issue : 1.1 Type : MACHINED PARTS  
 Previous Run : 34644  
 Written By :  
 Checked & Approved By :  
 Comment : Est. 01.05.04 New Issue EC

Drawing Name : SADDLE BILLET  
 Part Number : D6101003  
 Drawing Number : D610 REV A  
 Project Number : N/A  
 Drawing Revision : A  
 Material :  
 Due Date : 10/26/2007

Qty: 300 Unit: Each

## Additional Product

Number



Seq. #

Machine Or Operation:

Description :

PURCHASING



Comment: PURCHASING

Issue P/O: 4655

0207/09/24

- a) Description: Aluminum billet
- b) 7.875" x 6.250" x 2.00" thick
- c) Tolerance on all dimensions are +0.030"/-0.000"
- d) Grain direction along 7.875" length
- e) Material: 7075-T7351 (QQ-A-250/12)
- f) Material certification required

300

QC

D6101003P

7075-T7351 2X6.25X7.875



Comment: Qty.: 1.0000 Each(s)/Unit Total : 300.0000 Each(s)  
 7075-T7351 2X6.25X7.875

QC

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

- Receive & Inspect For Transit Damage
- Ensure material certification is attached

AS 08/14/11 (50)  
 08/12/24 x50

QC

QC8

DIMENSIONAL CHECK

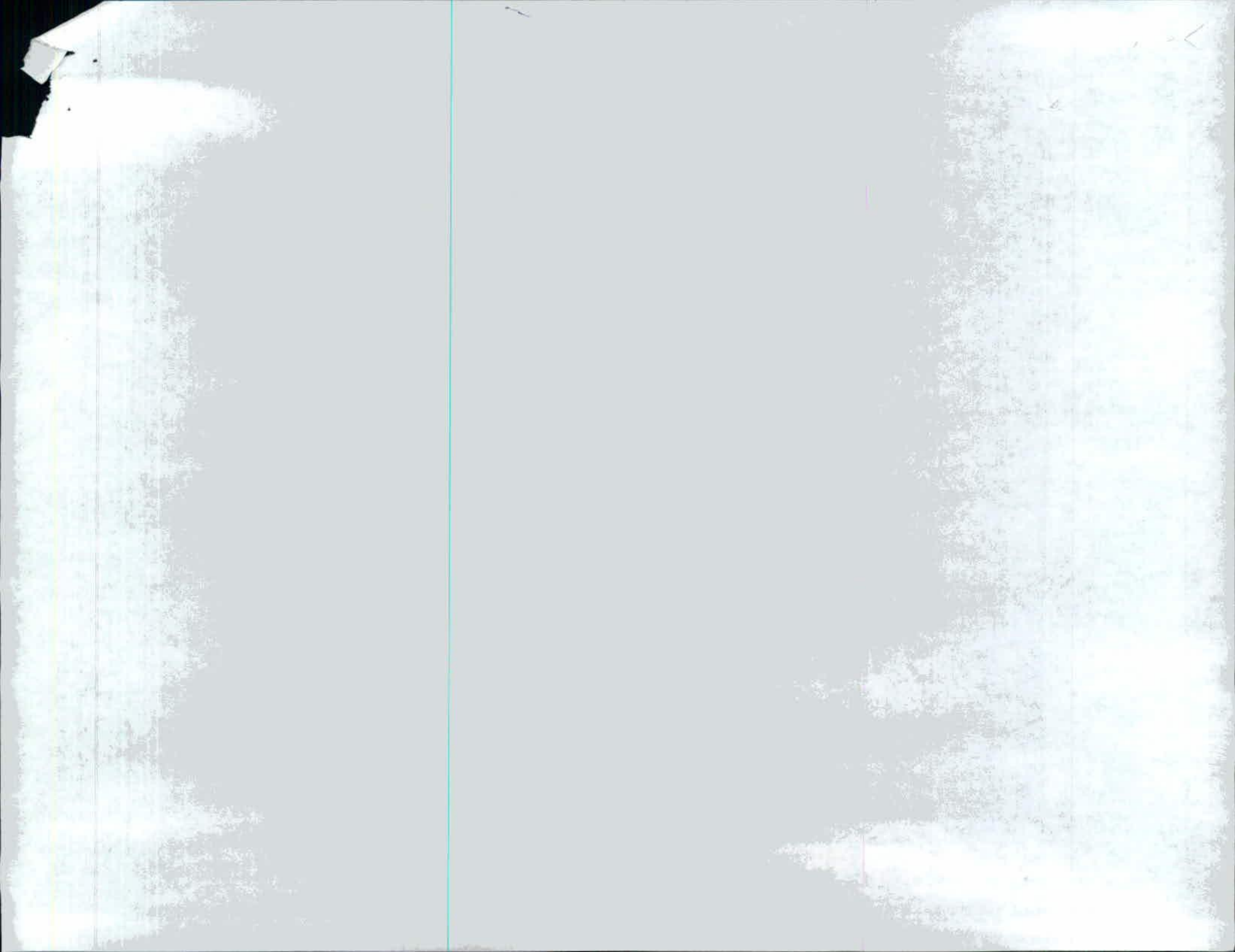


Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D6101

MA 08/12/17

(50)



Date: Wednesday, 9/26/2007 7:56:03 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SADDLE BILLET

Job Number: 34873

Part Number: D6101003

Job Number:



Seq. #: Machine Or Operation:

Description:

50 PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

60 0021

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



64/12/17 4500

08/12/17

mf 08-12-17



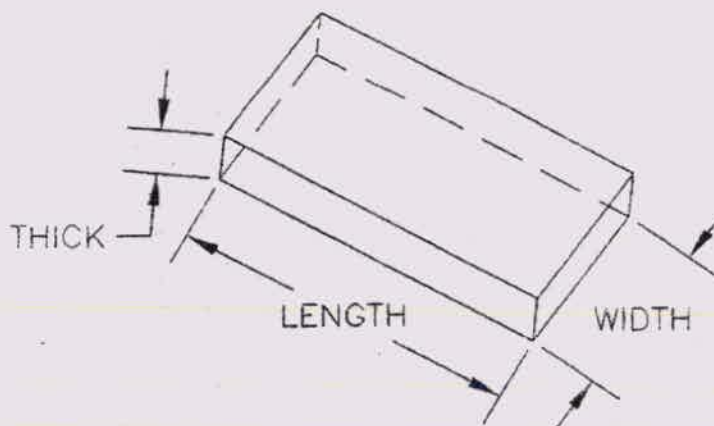




DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED AS	DRAWING NO. D6101	Rev. 1 OF 1
DATE 01.03.30		TITLE SADDLE ELLET, 7075	SCALE N'S
A	01.03.30	NEW ISSUE	

## SPECIFICATION CONTROL DRAWING

RELEASED  
21.04.23



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

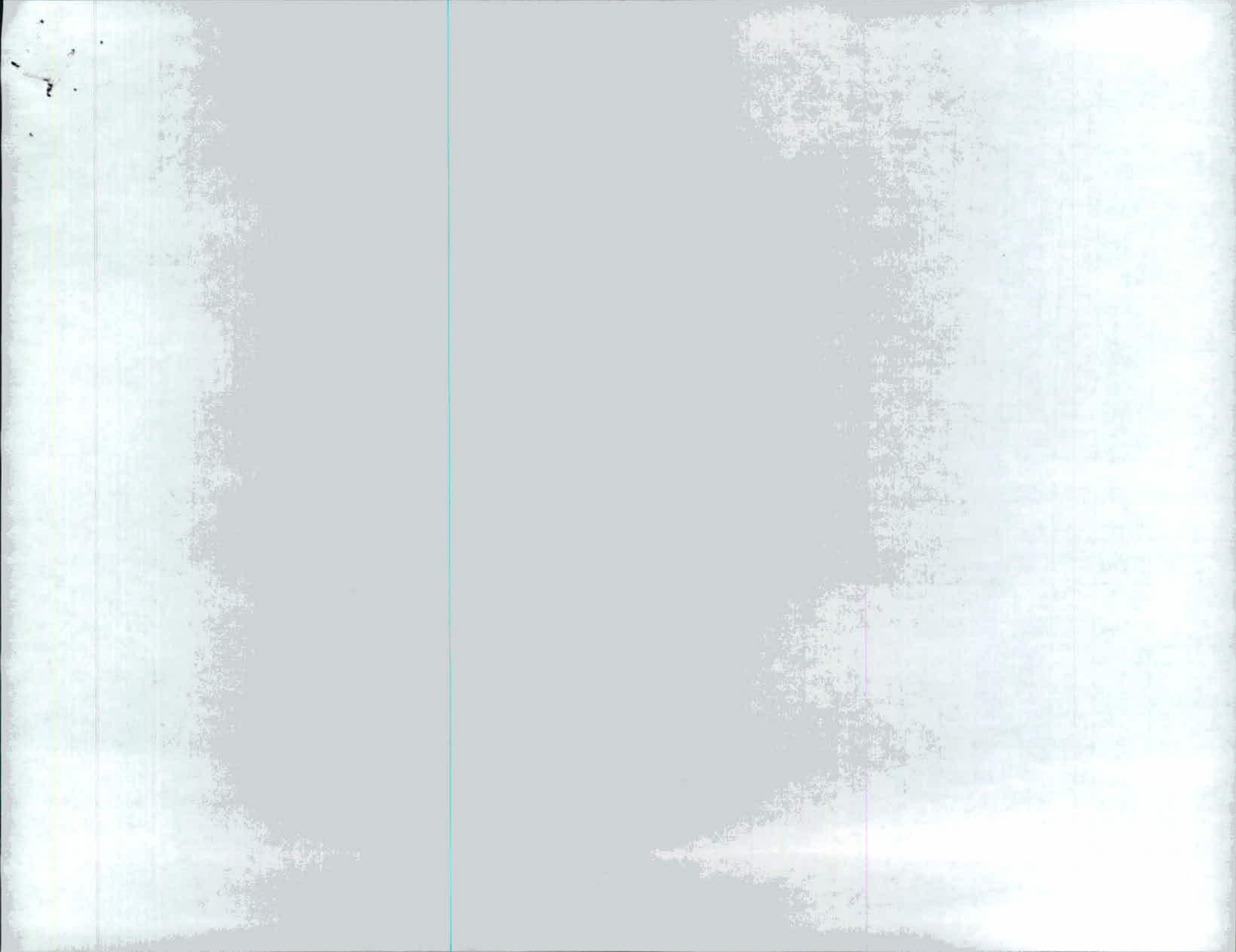
ALL DIMENSIONS ARE IN INCHES.

UNCONTROLLED COPY  
SUBJECT TO ANY CHANGE  
WITHOUT NOTICE  
NO. 348-3

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length

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O. REQUISITION CLIENT-CUSTOMER REQUISITION NO.		NO. COM. CLIENT-CUST. ORD. NO.		COMPT-ACCT.		VEND. SLS		TERR.		EXPEDIE PAR SHIP VIA		A.M. CASTLE & Co. (Canada) Inc.		SHIPPED DEC 15 2000	
CHETEUR-PURCHASING AGENT		TELEPHONE		H/C		TAXE		NO. COM. ORD.		REGION LIVRAISON-DEL. ZONE		F.A.B.-F.O.B.		BILL	
LINDA LACELLE		613 632-3336		9 0		1		1		C/C		PREPAID		NO. FEVIL/EMBALLAGE-B/L NUMBER	
VRE A-SHIP TO:		VENDU A-SOLD TO:		H/C		TAXE		NO. COM. ORD.		REGION LIVRAISON-DEL. ZONE		F.A.B.-F.O.B.		BILL	
		DART AEROSPACE LTD		9 0		1		1		C/C		PREPAID		NO. FEVIL/EMBALLAGE-B/L NUMBER	
		1270 ABERDEEN		9 0		1		1		C/C		PREPAID		NO. FEVIL/EMBALLAGE-B/L NUMBER	
		HAWKESBURY		9 0		1		1		C/C		PREPAID		NO. FEVIL/EMBALLAGE-B/L NUMBER	
		ON K6A 1K7		9 0		1		1		C/C		PREPAID		NO. FEVIL/EMBALLAGE-B/L NUMBER	

INSTRUCTIONS/LIVRAISON-DELIVERY		INSTRUCTIONS LIVRAISON (CONT.)-DELIVERY (CONT'D.)		INFORMATION CREDIT-CREDIT INFORMATION		ROUTE	
INQ-J85222						01-NL-12/11	
						30-NL-12/15	
						31-NL-12/16	

SCRIPTION - ITEM 1		2.0000 PLATE 7075-T7351 ALUM 6.25" X 6.00"		BLACK W/RED STRIPE		QTE/UNITE COM.-ORDERED		POIDS COM.-WT. ORDERED	
						49 PCS		372	
CERTIFICATE OF CONFORMANCE		INSTRUCTIONS		COULEE INFO-HEAT INFO		BALLOTS-BUNDLES		POIDS EXP.-WT. SHIPPED	
A.M. Castle & Co. certifies that the material(s) supplied under this document will meet and conform to the specifications of the product(s) described hereon.		TOL: +.030/- .000		Yellow 443778 A6		1		49	
A.M. Castle & Co. (Canada) Inc.		THICKNESS TOL.: +.030/- .000		Red 441611 A1				372	
		GRAIN TO RUN ALONG 6.00"		Black 440615 A3					
		PRIOR DIST/ORD: 01 706095							
WEIGHT FOR SHIPPING PURPOSES ONLY. SEE INVOICES FOR ACCURATE BILLING WEIGHT. PLEASE SIGN AND DATE DRIVER'S COPY FOR RECEIPT OF MATERIAL AND, IF CHECKED, TEST REPORTS.		INSTRUCTIONS (CONT'D.)		49 X 6.25' X 6.00"		FORME-SHAPE		I.A.C.	
						29.0885QF		6857	
								PR1	

SCRIPTION - ITEM 2		2.0000 PLATE 7075-T7351 ALUM 6.25" X 7.875"		BLACK W/RED STRIPE		QTE/UNITE COM.-ORDERED		POIDS COM.-WT. ORDERED	
						50 PCS		498	
TERMS AND CONDITIONS OF SALE		INSTRUCTIONS		COULEE INFO-HEAT INFO		BALLOTS-BUNDLES		POIDS EXP.-WT. SHIPPED	
SEE DISCLAIMERS AND LIMITATIONS ON THE REVERSE SIDE		TOL: +.030/- .000		Yellow 443778 A6		1		50	
		THICKNESS TOL.: +.030/- .000		Red 441611 A1				498	
		GRAIN TO RUN ALONG 7.875"		Black 440615 A3					
		PRIOR DIST/ORD: 01 706095							
		INSTRUCTIONS (CONT'D.)		50 X 6.25 X 7.875		FORME-SHAPE		I.A.C.	
						29.0885QF		6857	
								PR1	

SCRIPTION - ITEM 3		2.0000 PLATE 7075-T7351 ALUM 6.25" X 7.875"		BLACK W/RED STRIPE		QTE/UNITE COM.-ORDERED		POIDS COM.-WT. ORDERED	
						50 PCS		498	
ALL EXCEPTIONS FOR SHORTAGE OR DAMAGE MUST BE NOTED IN THE DRIVER COPY & CUSTOMER COPY OF THE DELIVERY RECEIPTS & SIGNED BY THE DRIVER & CUSTOMER. COPY OF SUCH RECEIPT PROPERLY NOTED MUST BE SUBMITTED WITHIN 0 DAYS WHEN CREDIT IS REQUESTED.		INSTRUCTIONS		COULEE INFO-HEAT INFO		BALLOTS-BUNDLES		POIDS EXP.-WT. SHIPPED	
		2 SKIPS		Yellow 443778 A6		1		50	
				Red 441611 A1				498	
				Black 440615 A3					
		INSTRUCTIONS (CONT'D.)		50 X 6.25 X 7.875		FORME-SHAPE		I.A.C.	
						29.0885QF		6857	
								PR1	





<b>SHIP TO:</b> A M CASTLE & CO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131
<b>SOLD TO:</b> AM CASTLE & CO- SOLD TO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131

# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215  
 Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
 4134371

<b>CUSTOMER PO NUMBER:</b> 01-49573		<b>WORK PACKAGE:</b>		<b>CUSTOMER PART NUMBER:</b> 6857 A97075-60		<b>SHIP RUN/LOAD ID:</b> 101320/13		<b>GOV'T CONTRACT NUMBER:</b>	
<b>KAISER ORDER NO:</b> 1069099	<b>LINE ITEM:</b> 1	<b>SHIP DATE:</b> 5-JUL-2008	<b>ALLOY:</b> 7075	<b>CLAD:</b> BARE	<b>TEMPER:</b> T7351	<b>PRODUCT DESCRIPTION:</b> MILL FINISH PLATE			
<b>WEIGHT SHIPPED:</b> 8662 LB	<b>QUANTITY:</b> 6 PCS EST.	<b>B/L NUMBER:</b> 2018501	<b>GAUGE:</b> 2.0000 IN	<b>WIDTH:</b> 48.500 IN	<b>LENGTH:</b> 144.500 IN				

### Certified Specifications

AMS 4078/RevG  
 ASTM B 209/Rev07  
 BSS 7055/RevA  
 DPS 4.713/RevAH  
 GSS16100/RevG

AMS-QQ-A-250/12  
 ASTM B 594/Rev06  
 CMMP 025/RevR  
 EAC MS1011/RevE  
 MMS 159/RevN

AMS-STD-2154  
 BAC 5439/RevH  
 CSTI 006/RevC  
 GAMPS 9101/RevB  
 PS 21211/RevK

Test Code: 4297

### Test Results

Lot: 440545A2 Cast 170

Drop 22

Ingot 2

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	73.9 : 74.2 (510 : 512)	62.4 : 62.6 (430 : 432)	11.7 : 11.8

(ASTM E1004)

Conductivity %IACS :	40.6 Min	40.7 Max
(MS/M) :	23.5 Min	23.6 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.08	0.16	1.4	0.05	2.5	0.19	5.8	0.03	0.01	0.01	TOT 0.05

CASTLE METALS CORP.  
 DATE RCVD 7/8/08  
 IAC 6857  
 APPROVED BY



**KAISER  
ALUMINUM**Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586**CERTIFIED TEST REPORT**Serial Number  
4134371

Lot: 441611A1 Cast 175 Drop 20 Ingot 1

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	73.9 : 74.2	62.8 : 62.9	11.9 : 12.0
			(510 : 512)	(433 : 434)	

(ASTM E1004)

Conductivity %IACS :	41.0 Min	41.3 Max
(MS/M) :	23.8 Min	24.0 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	
Actual	0.10	0.20	1.5	0.02	2.5	0.19	5.6	0.03	0.01	0.01	TOT	0.05

**ALLOY LIMITS**

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

**TEST NOTES**

Metal represented by this test report was immersion ultrasonically tested from one side and meets the Class A and Class B requirements of all specifications referenced on this test report.

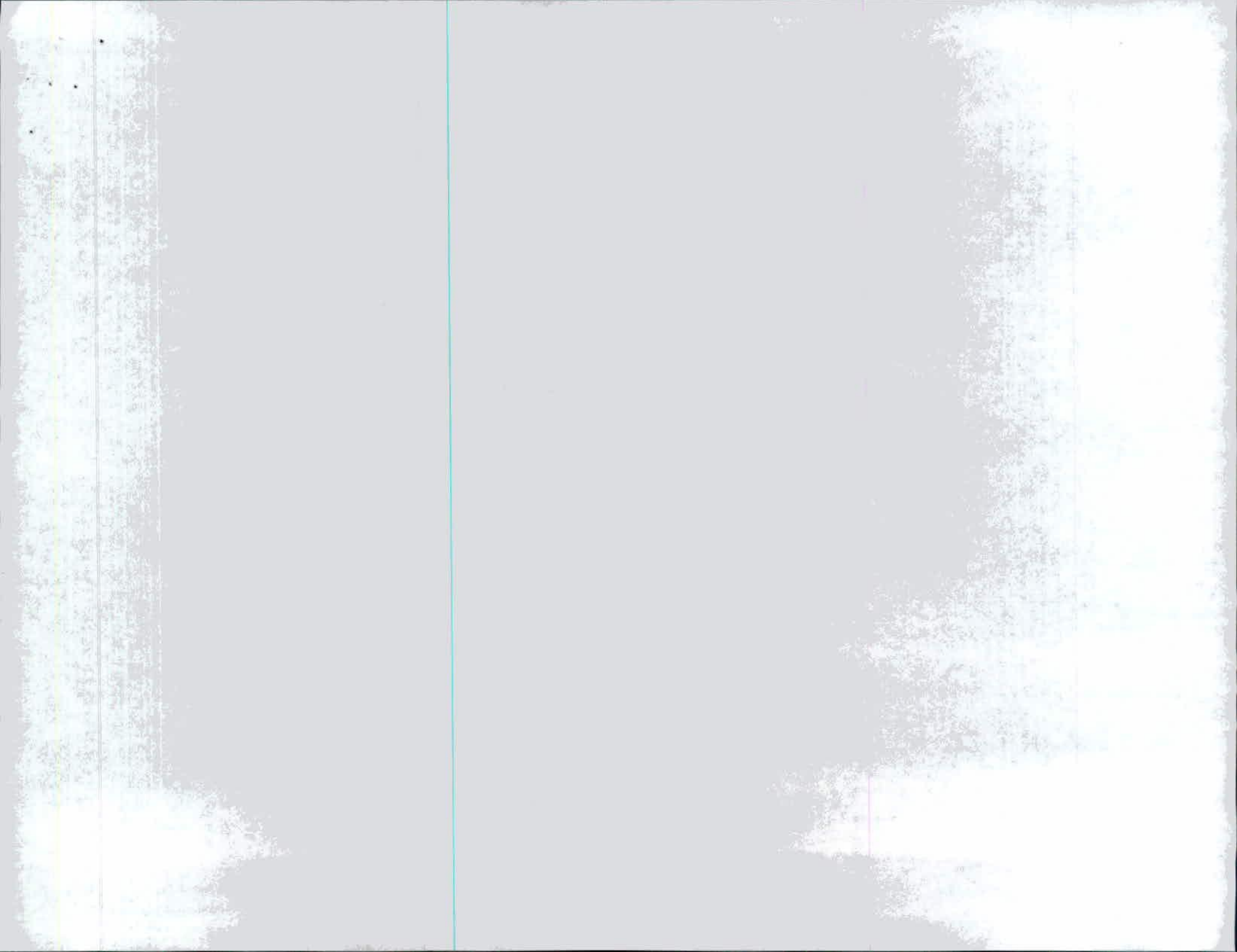
**CERTIFICATION**

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE U.S.A OR CANADA AND MANUFACTURED IN THE U.S.A , AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR







SHIP TO: A M CASTLE & CO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131		<b>KAISER ALUMINUM</b> Trentwood Works - Spokane, WA 99215 Phone: (800) 367-2586  <b>CERTIFIED TEST REPORT</b>  Serial Number 4107662				
SOLD TO: AM CASTLE & CO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131						
CUSTOMER PO NUMBER: 01-84697	WORK PACKAGE:	CUSTOMER PART NUMBER: 56132 A97075-60	SHIP RUN/LOAD ID: 101066/10	GOV'T CONTRACT NUMBER:		
KAISER ORDER NO: 1053100	LINE ITEM: 1	SHIP DATE: 8-SEP-2007	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE
WEIGHT SHIPPED: 8088 LB	QUANTITY: 5 PCS EST.	B/L NUMBER: 2014341	GAUGE: 2.0000 IN	WIDTH: 55.000 IN	LENGTH: 144.000 IN	

## Certified Specifications

AMS 4078/RevG  
ASTM B 209/Rev06  
BSS 7055/RevA  
GSS16100/RevG  
PS 21211/RevK

AMS-QQ-A-250/12  
ASTM B 594/Rev06  
CSTI 006/RevC  
MIL-STD-2154

AMS-STD-2154  
BAC 5439/RevH  
DPS 4.713/RevN/AmdAF  
MMS 159/RevN

Test Code: 4297

## Test Results

Lot: 401001A3 Cast 991

Drop 38

Ingot 3

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.6 : 72.2 (494 : 498)	61.6 : 62.1 (425 : 428)	10.6 : 11.3

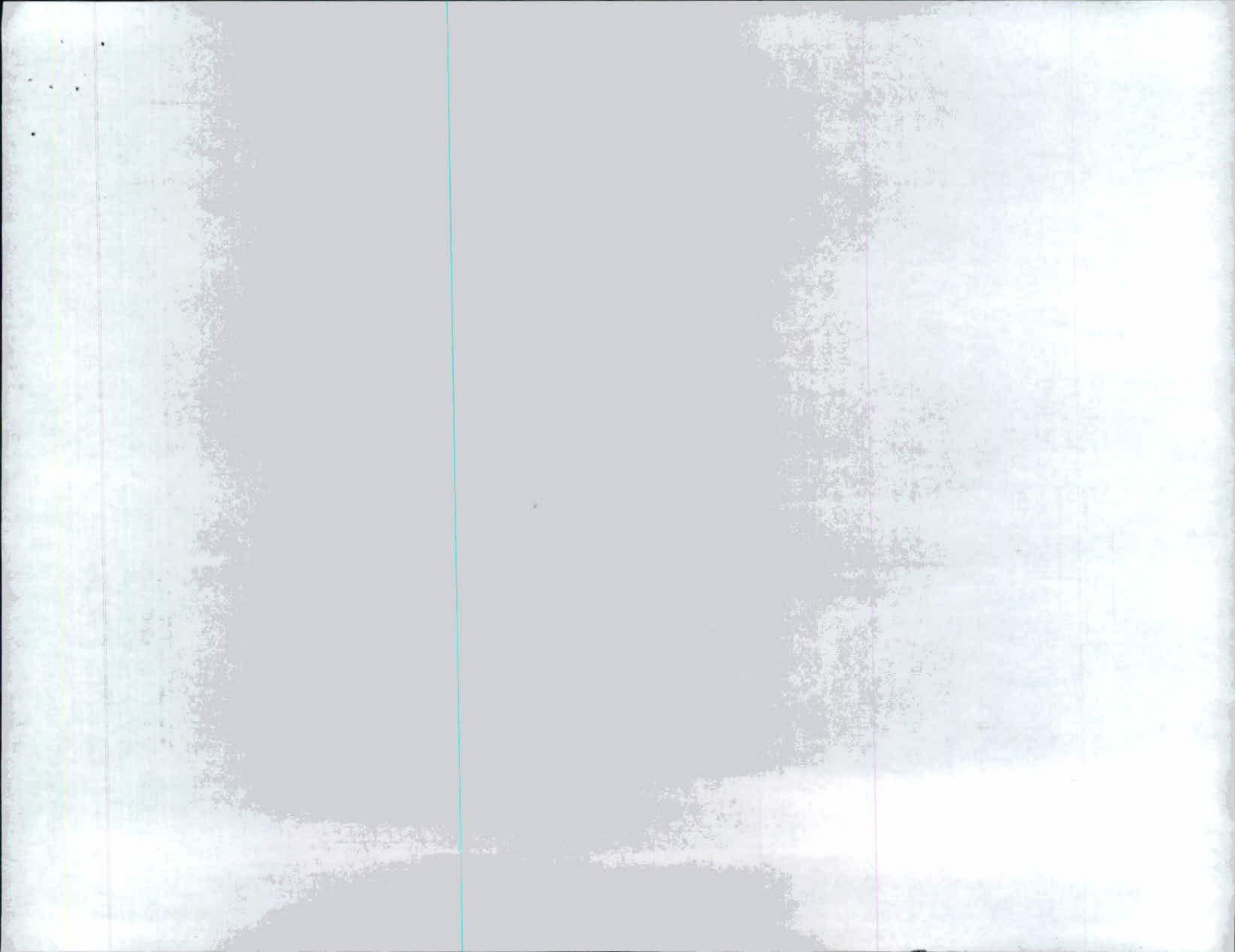
(ASTM E1004)

Conductivity %IACS :	41.6 Min	41.7 Max
(MS/M) :	24.1 Min	24.2 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.12	0.21	1.5	0.03	2.5	0.20	5.6	0.03	0.01	0.01	TOT 6.03

CASTLE METALS CORP.  
DATE RCVD 9/11/07  
IAC 56132  
APPROVED BY xlw-2





**KAISER  
ALUMINUM**Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586**CERTIFIED TEST REPORT**Serial Number  
4107662

Lot: 403934A3 Cast 985 Drop 13 Ingot 1

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.9 : 72.0 (489 : 496)	60.5 : 62.2 (417 : 429)	10.9 : 11.7

(ASTM E1004)

Conductivity %IACS :	40.8 Min	41.0 Max
(MS/M) :	23.7 Min	23.8 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	
Actual	0.12	0.23	1.4	0.02	2.5	0.19	5.6	0.03	0.01	0.01	TOT	0.03

**ALLOY LIMITS**

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

**TEST NOTES**

Metal represented by this test report was immersion ultrasonically tested from one side and meets the Class A and Class B requirements of all specifications referenced on this test report.

**CERTIFICATION**

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BILL POYNOR, LABORATORIES SUPERVISOR



